U. S. Steel
Clairton Works
400 State Street
Clairton, PA 15025-1855

July 20, 1994

U. S. Environmental Protection Agency
Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

Department of Environmental Resources
Bureau of Air Quality Control
Executive House -2nd & Chestnut
P.O. Box 2357
Harrisburg, PA 17105-2357

Department of Air Quaity
Allegheny County Health Department
301 Thirty-Ninth Street
Pittsburgh, Pennsylvania 15201
ATTN: Roger J. Westman

Office of Chief Council
Western Region
Department of Environmental Resources
400 Waterfront Drive
Pittsburgh, Pennsylvania 15222-4745

Gentlemen:

RE: #19 Battery Combustion Stack

This letter serves as a formal notification of our intention to initiate a compliance demonstration program on #19 Battery Combustion Stack on August 24-25, 1994. Three particulate emission concentration tests will be conducted. Each run will be of two hours duration. Each test will be complemented by simultaneous V. E. readings. This tentative schedule is contingent upon normal operations of the #19 Battery Combustion Stack and acceptable weather.

The sampling methods and equipment employed will be those referenced in 40 C.F.R. Part 60, Appendix A, most recent revision. A proposed test protocol is included as an attachment.

Questions regarding this program should be referred to Mr. W. C. Graeser at 233-1467.

Very truly yours,

G. T. Weber, Jr.
General Manager
USS Clairton Works

GTW/BAC
Attachment

TEST PROTOCOL
COMPLIANCE DEMONSTRATION
#19 BATTERY COMBUSTION STACK

USS CLAIRTON WORKS
CLAIRTON, PA

Particulate matter sampling will be performed in accordance with EPA Stationary Source Sampling Methods 1 through 5 (40 CFR, Part 60, Appendix A) and Sections 139.11 and 139.12 of the Pennsylvania Department of Environmental Resources (PA DER) Source Testing Manual. Three two-hour tests will be executed during normal operating conditions. Greater than 50 dry standard cubic feet of sample gas will be collected during each test run.

The process exhausts through a 186 inch diameter stack at stack platform level. A total of 24 traverse points (12 per diameter) will be sampled; the traverse points will be calculated in accordance with EPA Method 1. Sampling will be conducted through four equally spaced ports, with six traverse points sampled per port. Each point will be sampled for 5 minutes, thus bringing the total sampling time to 120 minutes.

In accordance with EPA Method 2, velocities and volumetric flow rates of the exhaust gas will be determined using a calibrated S type pitot tube. Positive and negative pitot lines will be leak-checked at the beginning and end of each test run. Gas velocity differential pressures along with stack gas temperatures will be recorded at each sampling point. Static pressure of the exhaust gas stream will be measured with the same pitot tube.

At the beginning and end of each test, gas concentrations of CO_2, O_2, and N_2 (by difference) will be determined with the use of Fyrite apparatus as specified by EPA Method 3. Gas concentrations will be used to obtain molecular weight of the process gas on a dry basis.

Percent moisture content, by volume, of the exhaust gas will determined by measuring the weight gain of the four sample train impingers in accordance with EPA Method 4.

As specified by EPA Method 5, each sample train will be assembled as required by the method, leak-checked on site at the beginning and end of each test run, and operated such that isokinetic conditions are maintained. Clean up of the sampling train will include an acetone rinse of the front-half components of the sample train. Front-half acetone rinses will be evaporated to dryness, desiccated, and weighed to a constant weight. Sample train glass fiber filters will be desiccated for 24 hours, and particulate matter weight will be determined gravimetrically. Rinse residue weights and filter weights will be measured to the nearest 0.1 milligram. One acetone blank will be prepared in the same manner as the test sample rinses. The blank residue weight will be subtracted from the test sample residue weights. After blank correction, front-half acetone rinse residue weights and sample train filter weights will be used to determine total particulate matter catch. Clean up and analytical procedures will follow the methodology of EPA Method 5.

All visible emissions determinations will be performed in accordance with EPA Stationary Source Sampling Method 9. Visible emission readings will be recorded for the duration of each particulate matter test.

A report summarizing the compliance test program will be submitted within 60 days following completion of field work. The report will describe test methodologies utilized and present a textual and tabular summary of the emissions results and related sampling information. Copies of operational data will be included in the report to verify that all testing was performed during periods of normal plant operation. Also incorporated into the report will be copies of the pre-test calibration results, post-test calibration results, the results of an audit conducted with a critical orifice provided by the Allegheny County Health Department Bureau of Air Quality, field data sheets for the particulate matter sampling and visible emissions determinations, computer-generated emissions calculations, and analytical results for each test.